

DRUMMOND FAA AIRPORT

GRANITE COUNTY

The Drummond Airport is located about 3 miles south-southwest of Drummond at 46 37 10 N and 113 11 50 W (Site No. 59 on Map II-1). Elevation at the airport is 4,238 feet. Meteorological data were collected at the airport for several years by the Federal Aviation Administration.

These data, primarily collected for aviation and weather forecasting uses, consist of short-term (5 minutes or less) averages of wind speed and wind direction, as well as other meteorological parameters. Data were gathered once per hour. The data have been analyzed by Battelle Pacific Northwest Laboratories. Because of a change in anemometer height, the data set was split into two parts for analysis: January 1, 1948, through October 15, 1950; and October 16, 1950, through December 31, 1954. Hourly summaries of data from the latter period were used in the *Montana Wind Energy Atlas*. For this period, data were gathered by an anemometer mounted on a ground mast at a height of 8.5 meters.

Since the site is located in a mountain valley, wind data from the site are representative only of the immediate area. The wind across nearby saddles and ridges is believed to be much higher in speed. Attempts by Montana DNRC to measure wind speeds at those sites were hampered by equipment failure and possible vandalism.

Average annual wind speed was 7.2 miles per hour. Average monthly wind speeds varied from 6.0 miles per hour in November to 8.3 miles per hour in April.

Average monthly wind power ranged from 36.0 watts/m² in October to 75.0 watts/m² in January. Average annual wind power was 52.0 watts/m².

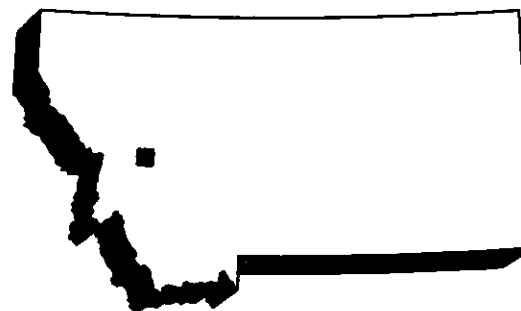


Table IV - 85
Monthly Wind Speed Distribution
GRANITE COUNTY - DRUMMOND FAA AIRPORT
10/16/50 - 12/31/54

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR	
CALM (<1.1)	8.8	7.2	7.6	4.8	5.9	5.3	6.9	5.8	6.4	9.5	12.8	12.3	8.0	CALM (<0.5)
1.1- 3.1	7.3	6.6	8.0	6.6	6.7	7.2	6.0	6.5	7.5	10.1	12.2	10.7	8.1	0.5- 1.4
3.4- 5.4	24.0	23.5	24.3	22.1	24.1	25.6	22.3	24.9	26.2	27.5	27.4	25.6	24.9	1.5- 2.4 S
S 5.6- 7.6	16.3	19.4	18.0	17.1	16.9	17.0	19.6	21.1	21.0	21.9	18.0	18.7	18.8	2.5- 3.4 P
P 7.8- 9.8	12.8	12.5	12.0	12.2	13.4	14.2	16.5	16.4	14.5	11.6	10.3	11.2	13.0	3.5- 4.4 E
E 10.1-12.1	12.1	15.5	14.9	17.9	15.5	16.5	15.0	15.9	13.8	10.6	9.6	12.0	13.9	4.5- 5.4 E
E 12.3-14.3	4.1	4.3	4.3	4.8	4.7	4.2	4.2	3.3	3.5	3.2	3.5	3.1	3.9	5.5- 6.4 D
D 14.5-16.6	4.0	3.5	3.6	5.3	4.0	2.9	3.7	2.6	2.8	2.2	2.0	2.3	3.2	6.5- 7.4
16.8-18.8	4.9	3.5	3.9	4.7	4.5	4.3	3.4	2.6	2.4	1.7	1.8	2.2	3.2	7.5- 8.4 M
M 19.0-21.0	2.3	1.8	1.5	2.0	2.3	1.5	1.1	0.8	1.1	1.0	0.8	0.8	1.4	8.5- 9.4 E
I 21.3-23.3	1.3	0.8	0.8	1.1	1.1	0.7	0.5	0.2	0.3	0.3	0.5	0.4	0.7	9.5-10.4 T
L 23.5-25.5	0.8	0.6	0.5	0.7	0.3	0.3	0.3	0.0	0.3	0.2	0.4	0.3	0.4	10.5-11.4 E
E 25.7-27.7	0.9	0.5	0.4	0.4	0.4	0.1	0.4	0.0	0.2	0.1	0.3	0.3	0.4	11.5-12.4 R
S 28.0-30.0	0.2	0.2	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.1	0.1	12.5-13.4 S
/ 30.2-32.2	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	13.5-14.4 /
H 32.4-34.4	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	14.5-15.4 S
O 34.7-36.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5-16.4 E
U 36.9-38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5-17.4 C
R 39.1-41.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5-18.4 O
41.4-43.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5-19.4 N
43.6-45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5-20.4 D
45.9-56.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5-25.4
57.0-68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5-30.4
68.2-79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5-35.4
79.4-90.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5-40.4
>90.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	>40.4
AVERAGE SPEED (MPH)	7.8	7.6	7.4	8.3	8.1	7.6	7.6	7.2	6.9	6.3	6.0	6.3	7.2	
AVERAGE SPEED (M/SEC)	3.5	3.4	3.3	3.7	3.6	3.4	3.4	3.2	3.1	2.8	2.7	2.8	3.2	
AVERAGE WIND POWER (WATTS/M**2)	75.0	61.0	59.0	71.0	65.0	54.0	51.0	39.0	42.0	36.0	39.0	40.0	52.0	

ANEMOMETER HEIGHT = 28.0 FEET = 8.5 METERS

SOURCE: BATTELLE PACIFIC NORTHWEST LABORATORIES